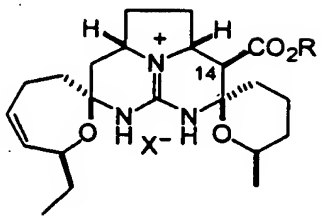
What is Claimed:

1. A compound of the formula:

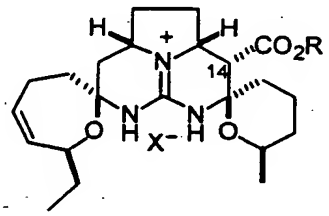


Wherein,

R= H, a carboxylic acid protecting group, an ω-alkoxycarboxylic acid or an ω-alkoxycarboxylic acid ester, and

X= any pharmaceutically acceptable counterion.

2. A compound of the formula:

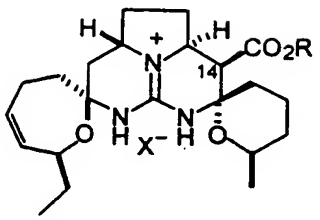


Wherein,

R= H, a carboxylic acid protecting group, an ω-alkoxycarboxylic acid or an ω-alkoxycarboxylic acid ester, and

X= any pharmaceutically acceptable counterion.

3. A compound of the formula:

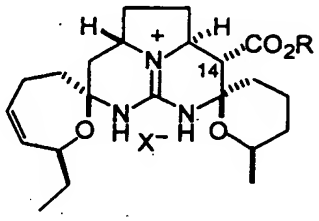


Wherein,

R= H, a carboxylic acid protecting group, an ω-alkoxycarboxylic acid or an ω-alkoxycarboxylic acid ester, and

X= any pharmaceutically acceptable counterion.

4. A compound of the formula:

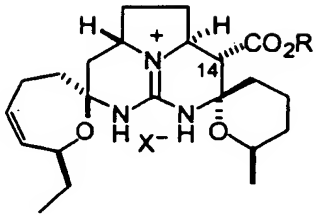


Wherein,

R= H, a carboxylic acid protecting group, an ω-alkoxycarboxylic acid or an ω-alkoxycarboxylic acid ester, and

X= any pharmaceutically acceptable counterion.

5. A compound of the formula:

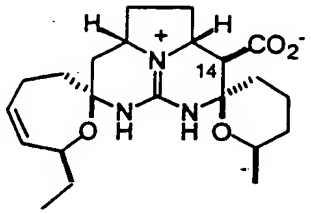


Wherein,

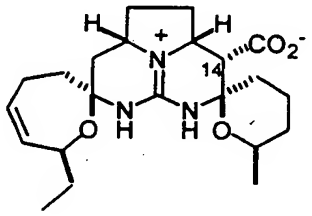
R= H, a carboxylic acid protecting group, an ω-alkoxycarboxylic acid or an ω-alkoxycarboxylic acid ester, and

X= any pharmaceutically acceptable counterion.

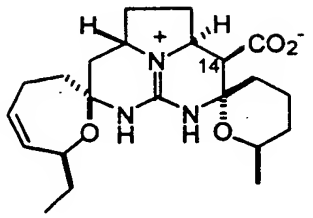
6. A compound of the formula:



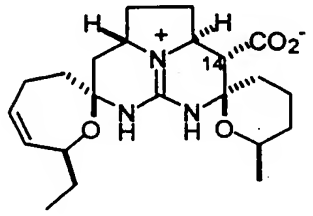
7. A compound of the formula:



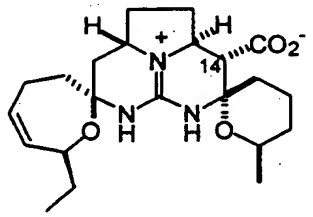
8. A compound of the formula:



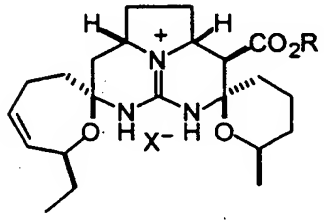
9. A compound of the formula:



10. A compound of the formula:



11. A method for synthesizing a pentacyclic compound of the formula:

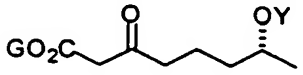


Wherein,

R= H, a carboxylic acid protecting group, an ω-alkoxycarboxylic acid or an ω-alkoxycarboxylic acid ester, and

X= any pharmaceutically acceptable counterion

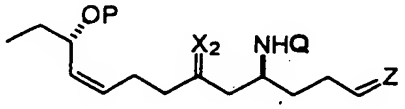
which method comprises reacting a compound of the formula:



wherein G= a carboxylic acid protecting group, an ω-alkoxycarboxylic acid or and ω-alkoxycarboxylic acid ester, and

Y= alcohol protecting group

with a compound of the formula:



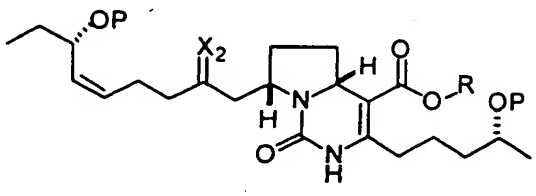
wherein X_2= O or ketone protecting group

Z= alkene or carbonyl protecting group

P= alcohol protecting group and

Q= amino carbonyl group

to produce a compound of the formula:



wherein X_2= O or ketone protecting group

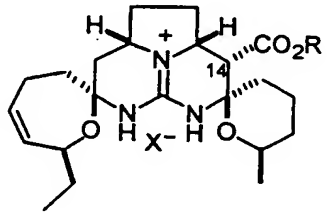
P= alcohol protecting group, and

R= carboxylic acid protecting group, ω-alkoxycarboxylic acid or ω-alkoxycarboxylic acid ester

which compound is subsequently converted to the pentacyclic compound by deprotection, incorporation of ammonia, and cyclization.

12. The method of claim 11, wherein when R = a carboxylic acid protecting group, the method further comprises the step of deprotecting the pentacycle compound of claim 11.

13. A method for synthesizing a pentacyclic compound of the formula :

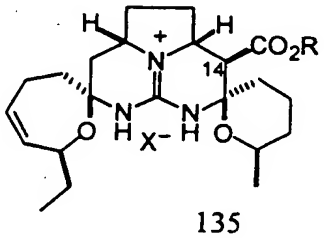


Wherein,

R= H, a carboxylic acid protecting group, an ω-alkoxycarboxylic acid or an ω-alkoxycarboxylic acid ester, and

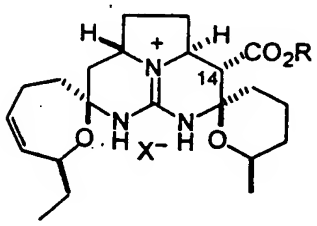
X= any pharmaceutically acceptable counterion,

which comprises epimerizing the stereocenter at carbon-14 of the compound of the formula:

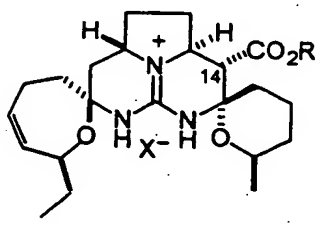


14. The method of claim 13, wherein when R= a carboxylic acid protecting group, the method further comprises the step of deprotecting the pentacycle compound of claim 13.

15. A method for synthesizing pentacyclic compounds B and C of the formulae:



B



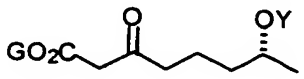
C

Wherein,

R= H, a carboxylic acid protecting group, an ω-alkoxycarboxylic acid or an ω-alkoxycarboxylic acid ester, and

X= any pharmaceutically acceptable counterion,

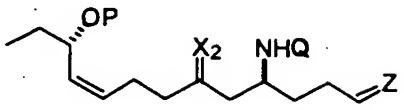
which comprises reacting a compound of the formula:



wherein G= a carboxylic acid protecting group, an ω-alkoxycarboxylic acid or an ω-alkoxycarboxylic acid ester, and

Y= an alcohol protecting group

with a compound of the formula:



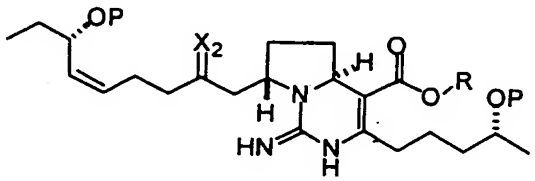
wherein X_2= O or a ketone protecting group

Z= an alkene or carbonyl protecting group

P= an alcohol protecting group, and

Q= an amidinyl group

To produce a compound of the formula:



wherein X_2= O or a ketone protecting group

P= an alcohol protecting group and

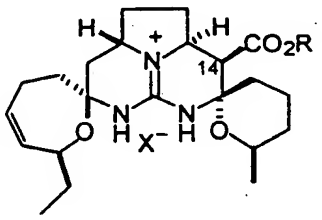
R= a carboxylic acid protecting group, an ω-alkoxycarboxylic acid or an ω-alkoxycarboxylic acid ester

which is subsequently converted to the pentacyclic compound by deprotection and cyclization.

16. The method of claim 15, wherein when R= a carboxylic acid protecting group, the method further comprises the step of deprotecting the pentacycle compound B of claim 15.

17. The method of claim 15, wherein when R= a carboxylic acid protecting group, the method further comprises the step of deprotecting the pentacycle compound C of claim 15.

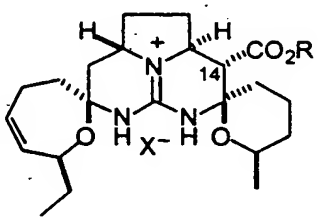
18. A method for synthesizing a pentacyclic compound of the formula:



R= H, a carboxylic acid protecting group, an ω-alkoxycarboxylic acid or an ω-alkoxycarboxylic acid ester, and

X= any pharmaceutically acceptable counterion.

which comprises epimerizing the stereocenter at carbon-14 and carbon 15 of the compound of the formula:



19. The method of claim 18, wherein when R= a carboxylic acid protecting group, the method further comprises the step of deprotecting the pentacycle compound of claim 18.

20. The compound of claim 1, 2, 3, 4, or 5 wherein R= allyl and X= Cl^-

21. The compound of claim 1, 2, 3, 4, or 5 wherein R=H, and X= Cl^-.

22. The compound of claim 1, 2, 3, 4, or 5 wherein R= $(CH_2)_{15}CO_2G$,

Wherein G=H, a counterion of a carboxylate salt, or a carboxylic acid protecting group, and X= Cl^-

23. The compound of claim 1, wherein R= $(CH_2)_{15}CO_2H$ and X = Cl^-.

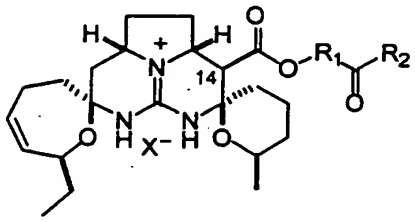
24. The compound of claim 2, wherein R= $(CH_2)_{15}CO_2H$ and X = Cl^-.

25. The compound of claim 3, wherein, R= $(CH_2)_{15}CO_2H$ and X = Cl^-.

26. The compound of claim 4, wherein R= $(CH_2)_{15}CO_2H$ and X = Cl^-.

27. The compound of claim 5, wherein R= $(CH_2)_{15}CO_2H$ and X = Cl^-.

28. A compound of the formula:



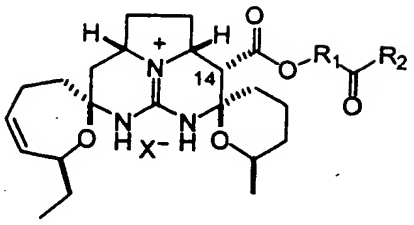
wherein R_1= any alkyl, aryl or substituted alkyl group

R_2= O^-, OH, OG_1, a spermidine moiety or a substituted spermidine moiety

wherein G_1 = a carboxylic acid protecting group and

X= any pharmaceutically acceptable counterion.

29. A compound of the formula:



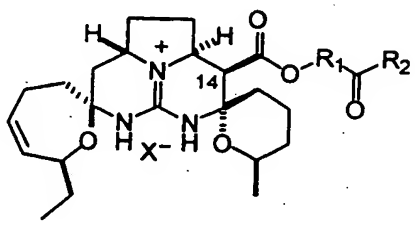
wherein R_1= any alkyl, aryl or substituted alkyl group

R_2= O^-, OH, OG_1, a spermidine moiety or a substituted spermidine moiety

wherein G_1 = a carboxylic acid protecting group and

X= any pharmaceutically acceptable counterion.

30. A compound of the formula:



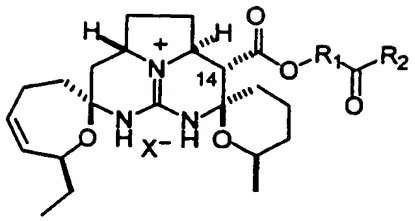
wherein R_1= any alkyl, aryl or substituted alkyl group

R_2= O^-, OH, OG_1, a spermidine moiety or a substituted spermidine moiety

wherein G_1 = a carboxylic acid protecting group and

X= any pharmaceutically acceptable counterion.

31. A compound of the formula:



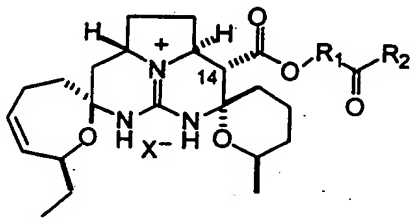
wherein R_1= any alkyl, aryl or substituted alkyl group

R_2= O^-, OH, OG_1, a spermidine moiety or a substituted spermidine moiety

wherein G_1 =carboxylic acid protecting group, and

X= any pharmaceutically acceptable counterion.

32. A compound of the formula:



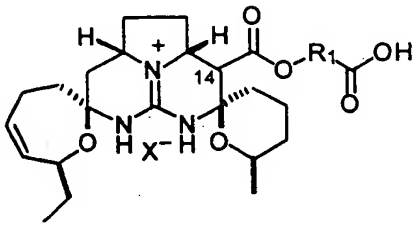
wherein R_1= any alkyl, aryl or substituted alkyl group

R_2= O^-, OH, OG_1, a spermidine moiety or a substituted spermidine moiety

wherein G_1 =carboxylic acid protecting group and

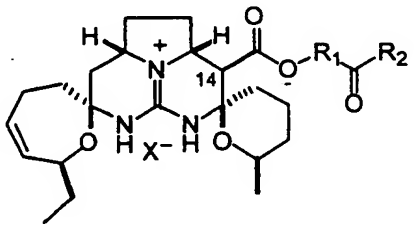
X= any pharmaceutically acceptable counterion.

33. The method of claim 11, wherein when R is an ω-alkoxycarboxylic acid, the method further comprises the step of reacting the pentacyclic compound of the formula:



wherein, R_1= any alkyl, aryl or substituted alkyl group

with a protected spermidine or a protected substituted sperimidine and subsequently deprotecting to produce the compound of the formula:

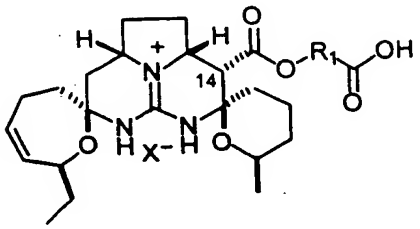


wherein R_1= any alkyl, aryl or substituted alkyl group

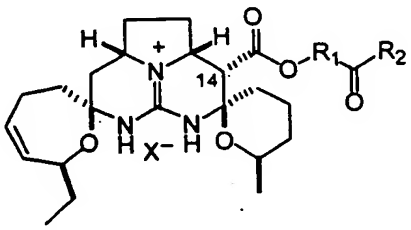
R_2= a spermidine moiety or a substituted spermidine moiety and

X= any pharmaceutically acceptable counterion.

34. The method of claim 13, wherein when R is an ω-alkoxycarboxylic acid the method further comprises the step of reacting the pentacyclic compound of the formula:



with a protected spermidine or a protected substituted sperimidine and subsequently deprotecting to produce the compound of the formula:

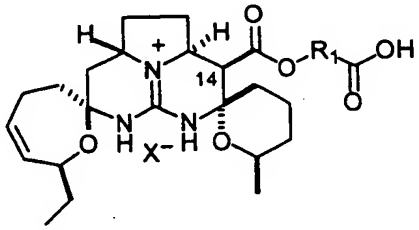


wherein R_1= any alkyl, aryl or substituted alkyl group

R_2= a spermidine moiety or a substituted spermidine moiety, and

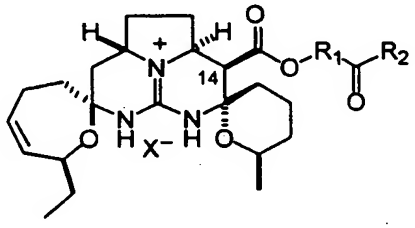
X= any pharmaceutically acceptable counterion.

35. The method of claim 15, wherein when R is an ω-alkoxycarboxylic acid the method further comprises the step of reacting the pentacyclic compound of the formula:



wherein, R_1= any alkyl, aryl or substituted alkyl group

with a protected spermidine or a protected substituted sperimidine and subsequently deprotecting to produce the compound of the formula:

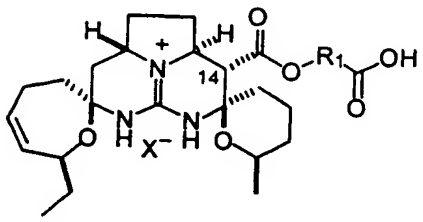


wherein R_1= any alkyl, aryl or substituted alkyl group

R_2= a spermidine moiety or a substituted spermidine moiety and

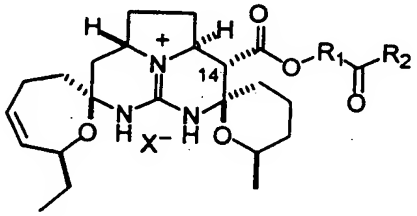
X= any pharmaceutically acceptable counterion.

36. The method of claim 15, wherein when R is an ω-alkoxycarboxylic acid the method further comprises the step of reacting the pentacyclic compound of the formula:



wherein, R_1= any alkyl, aryl or substituted alkyl group

with a protected spermidine or a protected substituted sperimidine and subsequently deprotecting to produce the compound of the formula:

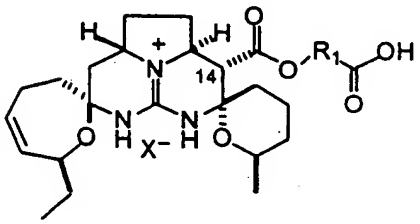


wherein R_1= any alkyl, aryl or substituted alkyl group

R_2= a spermidine moiety or a substituted spermidine moiety and

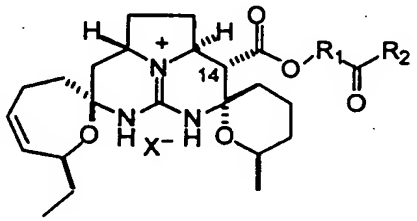
X= any pharmaceutically acceptable counterion.

37. The method of claim 18, wherein when R is an ω-alkoxycarboxylic acid the method further comprises the step of reacting the pentacyclic compound of the formula:



wherein, R_1= any alkyl, aryl or substituted alkyl group

with a protected spermidine or a protected substituted sperimidine and subsequently deprotecting to produce the compound of the formula:

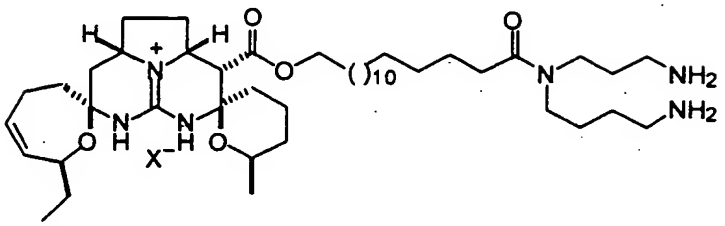


wherein R_1= any alkyl, aryl or substituted alkyl group

R_2= a spermidine moiety or a substituted spermidine moiety and

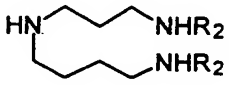
X= any pharmaceutically acceptable counterion.

38. A method for synthesizing Ptilomycalin of the formula:



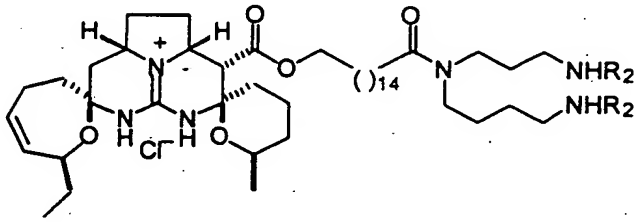
ptilomycalin A

which comprises reacting the pentacyclic compound of claim **22** with the compound of the formula:



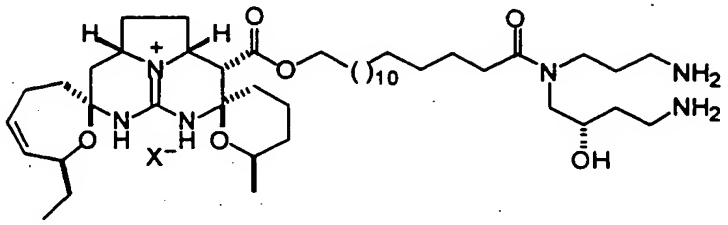
wherein R_2= an amine protecting group

to produce a compound of the formula:



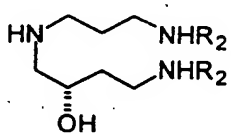
which is subsequently deprotected to produce Ptilomycalin A.

39. A method for synthesizing Crambescidin 800 of the formula:



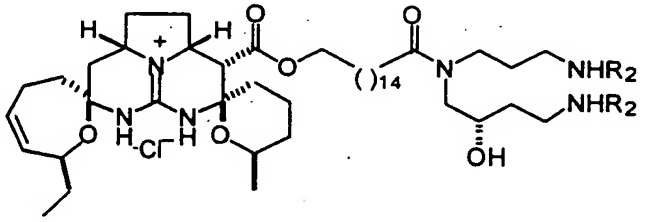
crambescidin 800

which comprises reacting the pentacyclic compound of claim **22** with the compound of the formula:



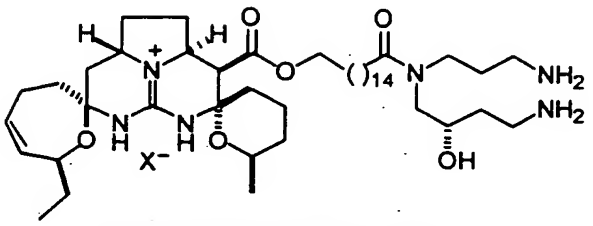
wherein R_2= an amine protecting group

to produce a compound of the formula:



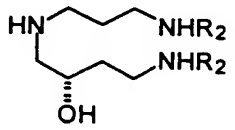
which is subsequently deprotected to produce Crambescidin 800.

40. A method for synthesizing 13, 14, 15-Isocrambescidin 800 of the formula:



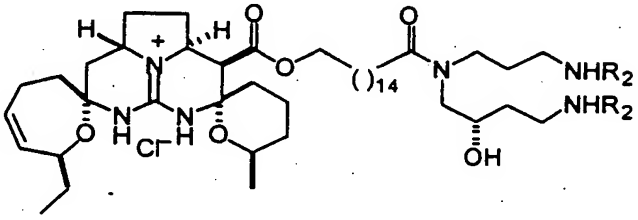
13,14,15-isocrambescidin 800

which comprises reacting the pentacyclic compound of claim **24** with the compound of the formula:



wherein R_2= an amine protecting group

to produce a compound of the formula:



which is subsequently deprotected to produce 13, 14, 15-Isocrambescidin 800.

41. An antitumor composition comprising a compound of claim 1, 2, 3, 4, 5, 6, 7, 8, 9 or 10 in admixture with a pharmaceutically acceptable carrier.

42. An antiviral composition comprising a compound of claim 1, 2, 3, 4, 5, 6, 7, 8, 9, or 10 in admixture with a pharmaceutically acceptable carrier.

43. An antifungal composition comprising a compound of claim 1, 2, 3, 4, 5, 6, 7, 8, 9 or 10 in admixture with a pharmaceutically acceptable carrier.

44. A method for treating tumors comprising administering to a subject in need of said treatment, an effective amount of compound of claim 1, 2, 3, 4, 5, 6, 7, 8, 9 or 10.

45. A method for treating viral infections comprising administering to a subject in need of said treatment, an effective amount of compound of claim 1, 2, 3, 4, 5, 6, 7, 8, 9 or 10.

46. A method for treating fungal infections comprising administering to a subject in need of said treatment, an effective amount of compound of claim 1, 2, 3, 4, 5, 6, 7, 8, 9 or 10.